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STATE DOCUMENTS

JUN 7 1971

ANALYSIS OF CONTRACTS AWARDED CALENDAR YEAR 1970

PREPARED BY THE
MONTANA STATE HIGHWAY COMMISSION
PLANNING SURVEY SECTION

IN COOPERATION WITH THE
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

CONTRACT ANALYSES
Calendar Year 1970

FOREWORD

The attached tabulations have been prepared from the Detailed Estimate and Contract Award sheet for all contracts awarded during the calendar year 1970. A brief explanation of each of the following tables is provided to help in the interpretation of the figures and to lessen the possibility of erroneous conclusions.

Table 1 - Summary of New and Reconstructed Roadway Only, by County and Financial District.

This table is intended to inform the user of how many actual miles of roadway were let to contract and the costs involved. It includes all items pertinent to the same section of roadway except structures.

Table 1A - Summary of Total Amounts Awarded by County and Financial District.

This table is a total of all miles and costs involved regardless of the type of project. Besides roadway costs, it includes signing, lighting, fencing and bridge projects.

Table 2 - Summary of Roadway Mileage Awarded by Systems.

The table involves the same type of construction as Table 1. Table 2, however, provides a cost per mile figure for the different systems and also provides a simple analysis of benefits by inclusion of the "cost per annual vehicle mile."

Table 3-3a-3c - Summary of Type of Construction.

A separate table has been prepared for each Federal Aid System with all projects including signing and Fencing classified into 10 different categories. The purpose of this table is to give a general indication of what type of construction is responsible for the major share of monies spent. For example, note the bulk of Interstate monies is spent for New Construction, whereas, the greater share for Primary and Secondary is spent for Reconstruction.

Table 4-4a-4c - Summary by Surface Type by Systems.

These tables indicate the average cost per mile of various items included in a completed roadway by type of surfacing. Caution should be exercised in using the average cost per mile data due to the small sample involved for some cost items.

Table 5 - Summary of Roadway Mileage Awarded by Number of Traffic Lanes.

This table deals with the same miles and costs involved in Tables 1 and 2.

Table 6-6a-6c-6d - Summary of Structures by Type.

These tables summarize the number of structures let by type and also provide a cost per square foot, by type of structure.

Table 7-7a-7c - Summary of Roadway Mileage Awarded by ADT.

The table involves only actual roadway constructed, as Tables 1, 2 and 5 and provides a relationship between the volumes of traffic, miles constructed and costs. It is possible to further develop this table to obtain a road user benefit on a vehicle mile basis.

Table 8 - Summary of Contracted and Non-contracted Costs by System.

Some items, such as railroad flagging, roadway materials, detours and traffic control devices are considered non-contract items in certain instances. The costs of such items are included in the Detailed Estimate, but not in the Contract Award Amount. This table tabulates the two costs for the users information.

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY COUNTY AND FINANCIAL DISTRICT

DURING CALENDAR YEAR 1970

THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAY. REFER TO TABLE 1A FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED

TABLE 1

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM MILES	PRIMARY SYSTEM MILES	SYSTEM COST	SECONDARY SYSTEM MILES	SYSTEM COST	OTHER SYSTEMS MILES	ALL SYSTEMS MILES	SYSTEMS COST
BLAINE HILL LIBERTY FD #02	---	9.281 9.281	1,337,867 1,337,867	1.423 8.147	398,855 846,257	---	1.423 17.428	398,855 2,184,124
DANIELS FD #03	---	---	---	4.730 4.730	474,182 473,186	---	4.730 4.730	474,182 473,186
DAWSON MC CONE FD #04	---	2.922 2.992	874,925 674,965	5.158 5.158	410,252 410,252	---	5.158 8.150	410,252 1,082,217
FELGUS FD #05	---	2.523 2.533	244,528 244,528	---	---	---	2.523 2.533	244,528 244,528
CASCADE CHOUTEAU JUDITH BASIN FD #06	---	6.445 6.445	636,812 636,812	11.578 14.515	433,118 1,242,555	---	11.578 14.515	433,118 1,242,555
MINERAL MISSOULA FD #03	10.734 10.734	1.168 1.168	547,015 547,015	26.094 .260	1,675,673 52,731	---	10.734 12.162	8,247,913 8,847,659
BEAVERHEAD SILVER BURN FD #09	5.538 5.538	1.189 1.231	319,194 47,892	---	---	---	6.727 7.058	1,325,525 1,373,217
PAFAC SWEET GRASS FD #10	12.270 13.270	---	5,118,399 5,118,399	6.676 6.676	717,643 717,643	---	6.676 13.270	717,643 5,118,399
BIG HORN CARBON STILLWATER YELLOWSTONE	5.371 12.359 ---	1.048,005 6.943 6.75	1,048,005 1,267,649 131,915	1.041 ---	104,658 ---	---	6.112 13.550 13.550	1,152,863 1,267,649 6,950,637
				1.800	641,521		1.800	641,521

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1970

THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAY. REFER TO TABLE 1A FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED
MAY 12, 1971

TABLE 1

COUNTY AND FINANCIAL DISTRICT FD #11	INTERSTATE SYSTEM MILES	CUST	PRIMARY SYSTEM MILES	CUST	SECONDARY SYSTEM MILES	COST	OTHER SYSTEMS		ALL SYSTEMS	
							MILES	COST	MILES	COST
	17.930	7,912,727	7.616	1,419,564	2.841	746,709			28.389	10,079,080
ROSEBUD FD #12	--6.883 6.883	--1,323,024 1,393,024			--7.926 7.926	--694,862 694,869			--14.809 14.809	--2,087,893 2,087,893
TOTAL	54.355	23,678,394	31.557	5,287,637	61.832	5,617,600			147.744	34,583,631

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TOTAL AMOUNTS AWARDED BY COUNTY AND FINANCIAL DISTRICT DURING CALENDAR YEAR 1970

TABLE 1A

TABLE 1A											
DURING CALENDAR YEAR 1970											
COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM MILES	PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS MILES	SYSTEMS CUST	ALL SYSTEMS MILES	COST	MAY	12, 1971
		MILES	COST	MILES	COST						
FLATHEAD LAKE	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
FD #01	-----	4,503	106,115	14,527	126,531	-----	-----	19,030	232,646	-----	-----
BLAINE			4,025	1,423	398,855			1,423	402,880		
GLACIER		6,392	109,755			1,057	65,747	7,449	175,502		
HILL		9,281	1,337,867					9,281	1,337,865		
LIBERTY				7,224	454,645			7,224	454,645		
TOOLE		-----	-----	-----	-----	-----	-----	-----	-----		
FD #02	9,216	15,673	1,451,647	8,647	853,500	1,057	65,747	24,216	3,792,647		
DANIELS		1,300	11,685	4,730	473,186			6,030	484,871		
PHILLIPS		2,200	617,766					2,200	617,766		
SHERIDAN		13,652	207,451	11,101	149,721			24,756	22,681		
VALLEY	-----	17,195	859,623	15,831	622,907	-----	-----	33,026	1,482,530		
FD #03											
CUSTER	17,638	1,820	5,287					19,458	3,759,726		
DAWSON		56,835		5,158	452,276			5,158	509,111		
MC CONE		2,992	674,965	4,539	114,903			7,531	789,868		
PRAIRIE	29,022							29,022	3,367,857		
WIBAUX	-----	2,602	8,663	-----	-----	-----	-----	2,602	8,663		
FD #04	46,660	7,415	688,915	9,697	567,179	-----	-----	63,772	8,435,225		
FERGUS											
GARFIELD	-----	9,371	384,528			-----	-----	9,371	384,528		
FD #05	-----	9,371	384,528	6,309	267,263	-----	-----	15,680	651,791		
CASCADE			15,858	9,470	298,197						
CHOUTEAU				12,045	434,315			21,515	748,370		
JUDITH BASIN				14,516	1,242,555			14,516	1,242,555		
PONDERA	12,248	8,466	966,605					8,466	966,605		
FD #06	19,948	4,520	21,922	6,322	23,550	-----	-----	26,920	5,156,500		
		18,586	1,356,801	32,883	1,700,420			71,417	8,104,138		
JEFFERSON	6,020			6,000	149,806			12,020	232,806		
LEWIS & CLARK	4,521	5,568	162,036	8,277	484,832	-----	-----	24,392	1,588,852		
FD #07	6,571	5,568	162,036	14,277	634,638			21,416	1,821,659		
GRANITE	15,191							15,191	23,456		

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TOTAL AMOUNTS AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1970
TABLE 1A

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
MINERAL	21.687	9,873,523	5.302	722,202	.366	61,834			21.687	9,882,294
MISSOULA		166,925							5.688	950,961
POWELL		19,346								19,348
RAVALLI					14,167	46,236			.603	60,403
SANDERS									3,482	79,100
FD #08	36.878	10,083,252	5.302	736,369	4.468	908,548			46.648	11,728,169
BEAVERHEAD	15.943	2,657,474	1.189	408,810					17.132	3,066,284
DEER LODGE		23,294								23,294
HADISON			12.052	324,053					12.052	324,053
SILVER BOW			7.831	326,053					7.831	427,418
FD #09	15.943	2,680,768	21.072	1,128,916		31,365			37.015	3,841,049
GALLATIN		61,713								61,713
PARK		71,869								906,472
SWEET GRASS	13.270	5,182,863			6.676	834,603			6.676	906,472
FD #10		5,919,445			25.600	10,450			38.870	5,736,413
					32.276	845,153			45.546	6,764,598
BIG HORN	28.968	5,417,109	9.346	1,624,448	1.041	104,858			30.009	5,521,967
CARBON			.675	131,915	39.700	25,544			49.046	1,649,992
STILLWATER	12.859	7,633,460			21.700	20,302			35.234	7,785,677
YELLOWSTONE	18.228	3,241,471	96.205	501,304	1.800	1,712,547			113.263	5,162,322
FD #11	58.085	16,592,040	106.226	2,257,667	64.241	1,870,251			228.552	20,719,958
CARTER			11.999	5,619					11.999	5,619
FALLON			12.186	904,366					12.186	904,366
POWDER RIVER					10.507	868,215			10.507	868,215
ROSEBUD	6.883	1,393,024	26.902	917,298	17.326	229,572			21.526	2,323,909
FD #12					28.433	1,797,787			62.218	4,108,109
TOTAL	213.454	51,341,315	232.813	10,049,915	231.589	10,225,542	1.057	65,747	678.913	71,682,515

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY SYSTEMS
DURING CALENDAR YEAR 1970
THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAYS
TABLE 2

SYSTEM	MILEAGE	TOTAL COST	COST PER MILE	ANNUAL VEHICLE MILES	COST PER ANNUAL VEHICLE MILE
MAY 12, 1971					
RURAL					
INTERSTATE RURAL	54.355	23,678,394	435,624	39,374,740	00.601
PRIMARY RURAL	29.930	4,685,391	156,544	11,427,420	00.410
SECONDARY RURAL	60.388	5,258,215	87,073	3,196,670	01.644
OTHER					00.000
SUBTOTAL RURAL	144.673	33,622,000	232,399	53,998,830	00.622
MUNICIPAL					
INTERSTATE MUNICIPAL					
PRIMARY MUNICIPAL	1.627	602,246	370,157	4,132,165	00.000
SECONDARY MUNICIPAL	1.444	359,385	248,881	452,235	00.145
OTHER					00.794
SUBTOTAL MUNICIPAL	3.071	961,631	313,132	4,584,400	00.000
TOTAL BY SYSTEM					00.209
INTERSTATE	54.355	23,678,394	435,624	39,374,740	00.601
PRIMARY	31.557	5,287,637	167,558	15,559,585	00.339
SECONDARY	61.832	5,617,600	90,852	3,648,905	01.539
OTHER					00.000
GRAND TOTAL	147.744	34,583,631	234,078	58,583,230	00.590

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1970

BY SYSTEM
TABLE 3

MAY 12, 1971

TYPE OF CONSTRUCTION	-----INTERSTATE-----	
	MILES	COST
RURAL		
NEW CONSTRUCTION	34.580	19,710,940
RECONSTRUCTION		
ADD TWO LANES	19.775	3,967,454
MAJOR STRUCTURES		7,285,510
RESURFACE		
STAGE CONSTRUCTION	128.808	18,696,581
TRAFFIC CONTROL, SEEDING & FENCING	29.465	561,787
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.551	1,046,961
TOTAL		51,269,233
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION	.275	29,021
TRAFFIC CONTROL, SEEDING & FENCING		43,061
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		72,082
ALL CONSTRUCTION		
NEW CONSTRUCTION	34.580	19,710,940
RECONSTRUCTION		
ADD TWO LANES	19.775	3,967,454
MAJOR STRUCTURES		7,285,510
RESURFACE		
STAGE CONSTRUCTION	129.083	18,725,602
TRAFFIC CONTROL, SEEDING & FENCING	29.465	604,848
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.551	1,046,961
TOTAL		51,341,315

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1970

BY SYSTEM
TABLE 3A

MAY 12, 1971

TYPE OF CONSTRUCTION	PRIMARY I	
	MILES	COST
RURAL		
NEW CONSTRUCTION	.386	48,986
RECONSTRUCTION	29.544	4,636,405
ADD TWO LANES		
MAJOR STRUCTURES		1,466,121
RESURFACE	59.426	1,632,638
STAGE CONSTRUCTION	.650	91,999
TRAFFIC CONTROL, SEEDING & FENCING	105.628	235,081
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		8,111,230
MUNICIPAL		
NEW CONSTRUCTION	.289	82,929
RECONSTRUCTION	1.338	519,317
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE	7.605	279,723
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	27.379	894,680
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.568	162,036
TOTAL		1,938,685
ALL CONSTRUCTION		
NEW CONSTRUCTION	.675	131,915
RECONSTRUCTION	30.882	5,155,722
ADD TWO LANES		
MAJOR STRUCTURES		1,466,121
RESURFACE	67.031	1,912,361
STAGE CONSTRUCTION	.650	91,999
TRAFFIC CONTROL, SEEDING & FENCING	133.007	1,129,761
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.568	162,036
TOTAL		10,049,915

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1970
BY SYSTEM
TABLE 3C

MAY 12, 1971

TYPE OF CONSTRUCTION	-----SECONDARY-----	
	MILES	COST
RURAL		
NEW CONSTRUCTION		
RECONSTRUCTION	60.388	5,258,215
ADD TWO LANES		
MAJOR STRUCTURES		1,398,358
RESURFACE	43.079	875,683
STAGE CONSTRUCTION	22.586	2,044,896
TRAFFIC CONTROL, SEEDING & FENCING	86.897	129,316
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	15.058	98,044
TOTAL		9,804,512
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION	1.444	359,385
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE	.467	24,350
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	1.670	37,295
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		421,030
ALL CONSTRUCTION		
NEW CONSTRUCTION		
RECONSTRUCTION	61.832	5,617,600
ADD TWO LANES		
MAJOR STRUCTURES		1,398,358
RESURFACE	43.546	900,033
STAGE CONSTRUCTION	22.586	2,044,896
TRAFFIC CONTROL, SEEDING & FENCING	88.567	166,611
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	15.058	98,044
TOTAL		10,225,542

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1970
BY SYSTEM
TABLE 3D

MAY 12, 1971

TYPE OF CONSTRUCTION	OTHER	
	MILES	COST
RURAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE	1.057	65,747
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		65,747
ALL CONSTRUCTION		
NEW CONSTRUCTION		
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE	1.057	65,747
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING		
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		65,747

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1970
INTERSTATE SYSTEM

TABLE 4

MAY 12, 1971

COST ITEM		STAGE CONSTR.	SURFACE TYPE BITUM. MIX	CONCRETE	ALL CONST.	MISC. ITEMS
GRADING	MILES	68.639	104.397		173.036	10.953
	COST	7,025,653	12,853,100		19,878,753	218,168
	COST/MILE	102,356	123,117		114,882	19,918
DRAINAGE	MILES	68.639	98.110		166.749	
	COST	2,683,992	2,461,246		5,145,238	27,204
	COST/MILE	39,103	25,086		30,856	
FOUNDATION	MILES	58.234	104.397		162.631	
	COST	353,051	6,918,039		7,271,090	
	COST/MILE	6,062	66,266		44,709	
SURFACING	MILES	64.558	104.397		168.955	
	COST	147,850	7,666,129		7,813,979	
	COST/MILE	2,290	73,432		46,248	
RDSIDE DEVEL.	MILES		4.215		4.215	
	COST		12,047		12,047	
	COST/MILE		2,858		2,858	
EROSION CTL.	MILES	68.639	104.122		172.761	21.211
	COST	645,088	853,720		1,498,808	225,405
	COST/MILE	9,398	8,199		8,675	10,626
TRAFFIC CTL.	MILES	68.639	104.397		173.036	40.418
	COST	37,725	1,152,913		1,190,638	498,276
	COST/MILE	549	11,043		6,880	12,328
FENCING	MILES	68.639	65.542		134.181	
	COST	490,028	232,204		722,232	
	COST/MILE	7,139	3,542		5,382	
MISC.	MILES	12.968	6.519		19.487	
	COST	2,400	2,400		4,800	
	COST/MILE	185	368		246	
BRIDGES	SQ. FEET					483,589
	COST					7,285,510
	COST/SQ. FOOT					15.065
ALL ITEMS	MILES	68.639	104.397		173.036	40.418
	COST	11,385,787	32,151,798		43,537,585	8,254,563
	COST/MILE	165,879	307,976		251,609	204,229

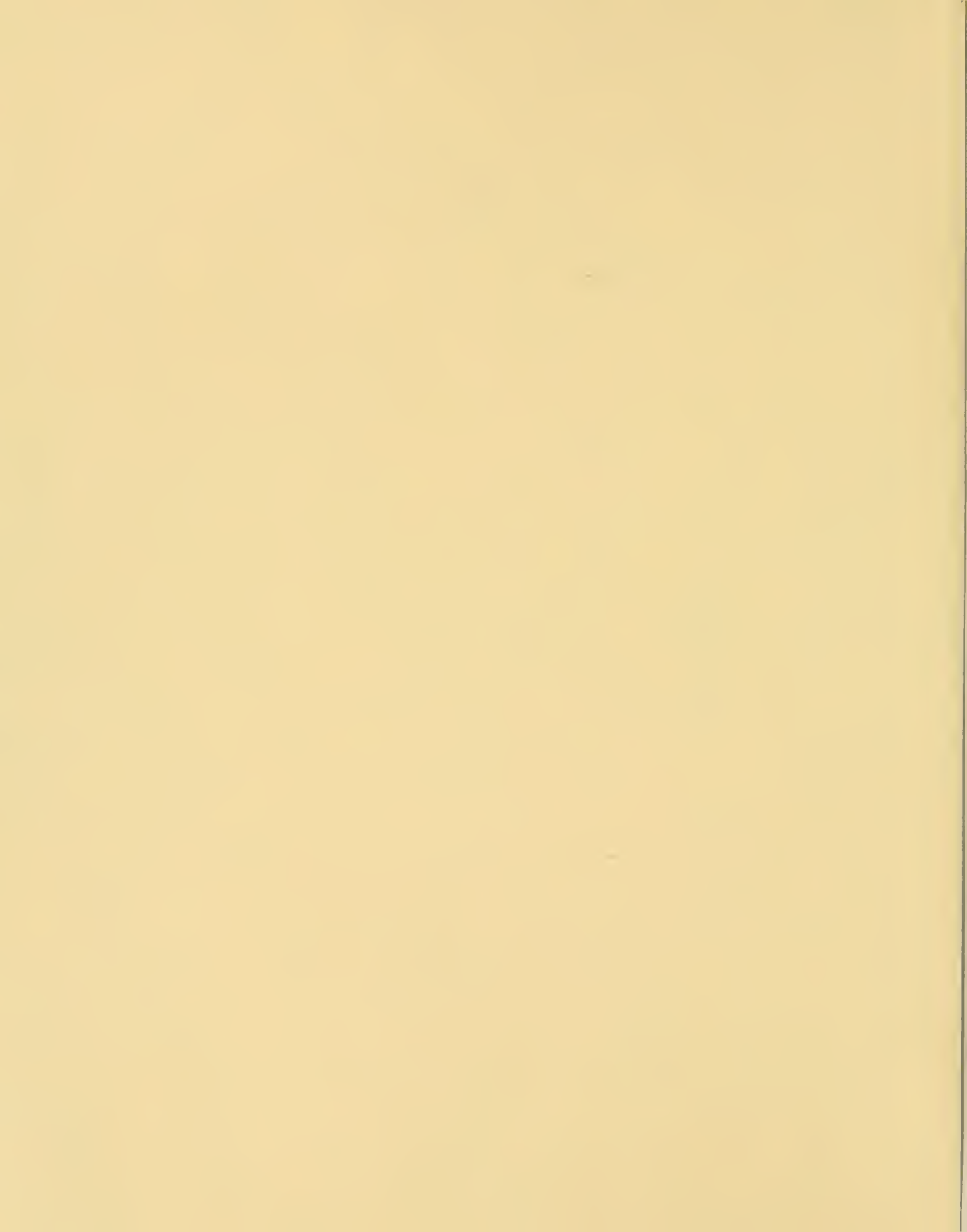
STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1970
PRIMARY SYSTEM

MAY 12, 1971

TABLE 4A

COST ITEM		SURFACE TYPE			ALL	MISC.
		GRAVEL	BITUM. MIX	CONCRETE	CONST.	ITEMS
GRADING	MILES	.650	48.498		49.148	
	COST	21,444	1,128,657		1,150,101	
	COST/MILE	32,990	23,272		23,400	
DRAINAGE	MILES	.650	46.047		46.697	
	COST	6,347	844,947		851,294	
	COST/MILE	9,764	18,349		18,230	
FOUNDATION	MILES	.650	44.311		44.961	
	COST	59,491	1,411,724		1,471,215	
	COST/MILE	91,524	31,859		32,722	
SURFACING	MILES	.650	99.156		99.806	
	COST	2,344	3,428,453		3,430,797	
	COST/MILE	3,606	34,576		34,374	
EROSION CTL.	MILES	.650	43.068		43.718	2.625
	COST	3,528	271,005		274,533	4,294
	COST/MILE	5,427	6,292		6,279	1,635
TRAFFIC CTL.	MILES	.650	99.156		99.806	128.429
	COST	500	312,608		313,108	1,105,967
	COST/MILE	769	3,152		3,137	8,611
FENCING	MILES		3.378		3.378	4.537
	COST		16,933		16,933	12,600
	COST/MILE		5,012		5,012	2,777
MISC.	MILES		9.218		9.218	
	COST		6,000		6,000	6,900
	COST/MILE		650		650	
BRIDGES	SQ. FEET					80,556
	COST					1,466,121
	COST/SQ. FOOT					18.200
ALL ITEMS	MILES	.650	99.156		99.806	133.007
	COST	93,654	7,420,327		7,513,981	2,595,882
	COST/MILE	144,083	74,834		75,285	19,516



STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1970
SECONDARY SYSTEM

MAY 12, 1971

TABLE 4C

COST ITEM		SURFACE TYPE		ALL CONST.	MISC. ITEMS
		GRAVEL	BITUM. MIX		
GRADING	MILES	14.309	81.889	96.198	
	COST	907,911	1,518,272	2,426,183	564
	COST/MILE	63,450	18,540	25,220	
DRAINAGE	MILES	14.309	61.832	76.141	
	COST	240,955	709,468	950,423	9,227
	COST/MILE	16,839	11,474	12,482	
FOUNDATION	MILES	13.686	76.418	90.104	
	COST	285,468	1,471,319	1,756,787	
	COST/MILE	20,858	19,253	19,497	
SURFACING	MILES	10.507	128.713	139.220	
	COST	8,239	2,934,028	2,942,267	
	COST/MILE	784	22,795	21,133	
ROADSIDE DEVEL.	MILES		.854	.854	
	COST		2,840	2,840	
	COST/MILE		3,325	3,325	
EROSION CTL.	MILES	14.309	67.491	81.800	.467
	COST	71,324	155,783	227,107	1,602
	COST/MILE	4,984	2,308	2,776	3,430
TRAFFIC CTL.	MILES	14.006	128.713	142.719	88.567
	COST	44,314	333,439	377,753	155,218
	COST/MILE	3,163	2,590	2,646	1,752
FENCING	MILES	10.204	12.354	22.558	
	COST	10,000	9,674	19,674	
	COST/MILE	980	783	872	
MISC.	MILES	10.204	28.678	38.882	
	COST	800	36,195	36,995	
	COST/MILE	78	1,262	951	
BRIDGES	SQ. FEET				54,596
	COST				1,398,358
	COST/SQ. FOOT				25.612
ALL ITEMS	MILES	14.309	128.713	143.022	88.567
	COST	1,569,011	7,171,018	8,740,029	1,564,969
	COST/MILE	109,652	55,713	61,109	17,669

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY NUMBER OF TRAFFIC LANES
DURING CALENDAR YEAR 1970

TABLE 5

MAY 12, 1971

NO. LANES	MILES	COST	COST/MILE
INTERSTATE SYSTEM			
2	19.775	3,967,454	200,629
4	34.580	19,710,940	570,009
TOTAL	54.355	23,678,394	435,624
PRIMARY SYSTEM			
2	29.999	4,584,505	152,821
4	1.558	703,132	451,304
TOTAL	31.557	5,287,637	167,558
SECONDARY SYSTEM			
2	61.832	5,617,600	90,852
4			
TOTAL	61.832	5,617,600	90,852
ALL SYSTEMS			
2	111.606	14,169,559	126,960
4	36.138	20,414,072	564,892
TOTAL	147.744	34,583,631	234,078



STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1970

TABLE 6

INTERSTATE SYSTEM

MAY

12, 1971

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X220	16	50,532	762,618	15.091
COMP. S/C GIRD.	X071	2	12,616	170,628	13.524
	X771	5	65,110	1,380,076	21.196
CONC. PRESTR. GIRD.	X081	19	113,872	1,592,100	13.981
	X181	6	52,612	814,011	15.471
	X281	21	134,567	1,767,548	13.135
	X781	5	54,280	798,529	14.711
		74	483,589	7,285,510	15.065

STATE HIGHWAY COMMISSION OF MONTANA
 PLANNING SURVEY SECTION
 SUMMARY OF STRUCTURES BY TYPE
 DURING CALENDAR YEAR 1970

TABLE 6A

PRIMARY I SYSTEM

MAY

12, 1971

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. PRESTR. GIRD.	X081	12	80,556	1,466,121	18.200
		12	80,556	1,466,121	18.200



STATE HIGHWAY COMMISSION OF MONTANA
 PLANNING SURVEY SECTION
 SUMMARY OF STRUCTURES BY TYPE
 DURING CALENDAR YEAR 1970
 SECONDARY SYSTEM

TABLE 6C

MAY

12, 1971

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
COMP. S/C GIRD.	X071	1	30,924	1,018,056	32.921
CONC. PRESTR. GIRD.	X081	7	23,672	380,302	16.065
		8	54,596	1,398,358	25.612

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1970

TABLE 6D

ALL SYSTEMS

MAY

12, 1971

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X220	16	50,532	762,618	15.091
COMP. S/C GIRD.	X071	3	43,540	1,188,684	27.300
	X771	5	65,110	1,380,076	21.196
CONC. PRESTR. GIRD.	X081	38	218,100	3,438,523	15.765
	X181	6	52,612	814,011	15.471
	X281	21	134,567	1,767,548	13.135
	X781	5	54,280	798,529	14.711
		94	618,741	10,149,989	16.404

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1970

TABLE 7A
SYSTEM - INTERSTATE

MAY

12, 1971

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	5.538	\$ 1,006,331	\$ 181,713
1000-1499	.000		
1500-1999	31.180	\$ 14,798,805	\$ 474,624
2000-2999	17.637	\$ 7,873,258	\$ 446,405
3000-4999	.000		
5000-OVER	.000		
TOTAL	54.355	\$ 23,678,394	\$ 435,624

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1970

TABLE 7B

SYSTEM - PRIMARY I

MAY

12, 1971

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.378	\$ 147,862	\$ 391,169
0200-0299	.000		
0300-0399	2.992	\$ 674,965	\$ 225,589
0400-0499	.000		
0500-0999	16.900	\$ 2,661,582	\$ 157,490
1000-1499	9.653	\$ 1,073,255	\$ 111,183
1500-1999	.000		
2000-2999	.466	\$ 182,958	\$ 392,613
3000-4999	.000		
5000-OVER	1.168	\$ 547,015	\$ 468,334
TOTAL	31.557	\$ 5,287,637	\$ 167,558

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1970

TABLE 7D

MAY

12, 1971

SYSTEM - SECONDARY

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	28.756	\$ 2,392,080	\$ 83,185
0100-0199	24.105	\$ 1,707,071	\$ 70,818
0200-0299	6.581	\$ 809,107	\$ 122,945
0300-0399	.000		
0400-0499	.000		
0500-0999	2.130	\$ 656,611	\$ 308,268
1000-1499	.000		
1500-1999	.000		
2000-2999	.000		
3000-4999	.260	\$ 52,731	\$ 202,811
5000-OVER	.000		
TOTAL	61.832	\$ 5,617,600	\$ 90,852

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF CONTRACTED AND
NON-CONTRACTED COSTS BY SYSTEM
DURING CALENDAR YEAR 1970

TABLE 8

MAY 12, 1971

SYSTEM	CONTRACTED COST	NON CONTRACTED COST	TOTAL
INTERSTATE	\$ 51,341,315	\$ 5,629,971	\$ 56,971,286
PRIMARY I	\$ 10,049,915	\$ 1,069,377	\$ 11,119,292
SECONDARY	\$ 10,225,542	\$ 1,109,913	\$ 11,335,455
OTHER	\$ 65,747	\$ 7,123	\$ 72,870
TOTAL	\$ 71,682,519	\$ 7,816,384	\$ 79,498,903

